

Rosemont Copper Project EIS

Cooperating Agency Coordination Meeting 04/15/2010

Agenda

Location: Federal Building, 300 West Congress, Tucson, Arizona, Room 4B

Facilitator: Teresa Ann Ciapusci, Cooperating Agency Liaison

AGENDA

09:30 – 09:45	Welcome	Ciapusci
09:45 – 10:30	TEP Powerline Route Alternatives	Beck
10:30 – 10:45	BREAK	
10:45 – 11:30	Sustainable Technology and Practices	Samorano

INVITED COOPERATING AGENCIES

Tribes: Tohono O'odham Nation

Federal: Air Force, Army COE, BLM, Smithsonian Whipple Observatory

State of Arizona: AZDEQ, AZMMR, AZDWR, AZGF, AZGS, AZSMI, AZSLD, AZSP, ADOT

Local: Pima County, City of Tucson, Town of Sahuarita

INVITED GUESTS

Consultants:

Cheniae & Associates

Gordon Cheniae

Tucson Electric Power Company

Ed Beck

Rosemont Copper Company

Fermin Samorano

Rosemont Copper Project EIS

Cooperating Agency Coordination Meeting 04/15/2010

Meeting Notes

Welcome Remarks	Teresa Ann Ciapucci and Reta Laford
Discussion:	
⇒ Forest Service is reassessing the project schedule	
⇒ The Forest Service reiterated its commitment to provide cooperating agencies with an internal administrative review of DEIS components prior to public comment period	
TEP Powerline Route Alternatives	Ed Beck (Tucson Electric Power Company)
Discussion:	
PPT: Rosemont 138 kV Transmission Line Siting Study Project	
⇒ Handout: Preliminary Route Alternatives	
⇒ <ul style="list-style-type: none"> ▪ TEP modified the original study area footprint (reduced and refined) ▪ 11 route configurations are under study ▪ Corridor width for each route is 500 feet 	
⇒ TEP process includes public involvement opportunities <ul style="list-style-type: none"> ▪ TEP is currently seeking public comment on five (5) route alternatives – comment period ends May 7, 2010 ▪ After comments are assessed, TEP anticipates narrowing the number of alternatives to submit with the application package to about 3 alternatives 	
⇒ TEP is currently working on Task 4 (Route Alternative Selection) in its approval process. Next step is submission of application to the Arizona Corporation Commission. The application package will include a copy of the Forest Service Draft Environmental Impact Statement; therefore, the DEIS schedule will affect the application submission schedule	
Sustainable Technology and Practices	Fermin Samorano (Rosemont Copper Company)
Discussion:	
⇒ PPT: Rosemont Sustainability Initiatives	

**Rosemont Copper Project
Cooperating Agency Meeting
April 15, 2010**

Page 1 of 4

Attendance Record

Cooperating Agencies	Participant(s)
Tohono O'odham Nation	Peter Steeve THPO Addison Smith
Air Force, 162d Fighter Airwing	Unavailable – advance notice
Army Corps of Engineers	Unavailable – advance notice
USDI BLM	Linda L. [Signature]
Smithsonian Institution	UNAVAILABLE - ADVANCE NOTICE
AZ Dept of Environmental Quality	UNAVAILABLE - ADVANCE NOTICE
AZ Dept of Mines and Mineral Resources	Unavailable – advance notice

**Rosemont Copper Project
Cooperating Agency Meeting
April 15, 2010**

Page 2 of 4

Cooperating Agencies	Participant(s)
AZ Department of Transportation	Charles Beck
AZ Dept of Water Resources	UNAVAILABLE - ADVANCE NOTICE
AZ Game and Fish Department	John Windes
AZ Geological Survey	JUN SPENCER
AZ State Land Department	David J. [Signature]
AZ State Mine Inspector	Garrett Fiem [Signature]
AZ State Parks	Bob Siskera
City of Tucson	

**Rosemont Copper Project
Cooperating Agency Meeting
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Page 3 of 4

Cooperating Agencies	Participant(s)
Pima County	Nirde Fyffe Log Neff
Town of Sahuarita	Orlathia Henderson

**Rosemont Copper Project
Cooperating Agency Meeting
April 15, 2010**

Page 4 of 4

Guests	Affiliation
	G.L. Cheniae and Associates
Ed Beh	Tucson Electric Power Company
Ferris Smorano	Rosemont Copper Company

**Rosemont Copper Project
Cooperating Agency Meeting
April 15, 2010**

Page 1 of 2

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Army Corps of Engineers	Unavailable – advance notice
USDI BLM	Cindy Alvarez
Smithsonian Institution	Unavailable – advance notice
AZ Dept of Environmental Quality	Unavailable – advance notices
AZ Dept of Mines and Mineral Resources	Unavailable – advance notice
AZ Department of Transportation	Charles Beck
AZ Dept of Water Resources	Unavailable – advance notice
AZ Game and Fish Department	John Windes
AZ Geological Survey	Jon Spencer
AZ State Land Department	David Jacobs
AZ State Mine Inspector	Garrett Fleming
AZ State Parks	Bob Sejkora
City of Tucson	
Pima County	Nicole Fyffe Loy Neff
Town of Sahuarita	Orlanthia Henderson

**Rosemont Copper Project
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Page 2 of 2

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Rosemont Sustainability Initiatives

April 15, 2010



21st Century Design Philosophy

- Community Endowment
\$25 million permanent endowment and \$500,000 annual
- Sustainable Water Supply
Replace what we take and protect what is there
- Concurrent Reclamation
Reclamation starts the first year of operation
- Scenic Value Recognition
Perimeter buttress and reduced footprint
- Modern Technology
GPS high precision equipment and filtered tailings.

Education Initiatives

- Education is top priority for community involvement
- STEM (science, technology, engineering, mathematics) fields as well as agriculture and reclamation at core of support initiatives
- Provide scholarships and grant opportunities for local school districts and colleges
- Partners include:
 - University of Arizona
 - Pima Community College
 - Vail School District
 - Sahuarita School District
 - San Miguel High School

Working Toward Higher Education

University of Arizona

- UA Dept of Natural Resources – 5 yr \$537,000 reclamation study
- AZ Science Foundation grants to benefit scholarships at the UA School of Mining
- UA Women in Science & Engineering
- Scholarship programs at UA
- SBS College Magellan sponsor of anthropology and archaeology students
- Arizona Assurance Program - \$100,000 for scholarships over 4 years

Pima College

- Launched programs focused on science and engineering with an emphasis on mining
- 10 scholarships totaling \$20,000 in first year
- Local students who will be first in family to attend college
- Pima College to administer scholarship program

Community Endowment

- Current community involvement program for local charities and activities.
- During operations, \$25 million endowment plus annual donation of \$500,000 run by a Board of Directors from community

- The Arizona Trail
- University of Arizona Athletics
- The University of Arizona College of Engineering
- Rocky Mountain Elk Foundation
- Tucson SME Chapter
- Chicanos Por La Causa
- Tucson Rough Riders
- SME Diggers & Duffers Golf Tournament
- Tucson Gem & Mineral Show
- Community Water Company
- Sahuarita Rage ASA Fastpitch
- Teachers Wish List
- Community Food Bank
- El Tour de Tucson
- Arizona Cattle Growers
- Tucson Hispanic Chamber
- Tucson Metro Chamber
- Green Valley/Sahuarita Chamber of Commerce
- Arizona Mining Association
- Greater Green Valley Community Foundation
- Tucson Regional Economic Opportunities
- Green Valley Rotary
- Volunteer Center of So. Arizona
- Arizona-Mexico Commission
- AMIGOS
- Metropolitan Pima Alliance
- Arizona Geological Society
- Arizona Hydrogeological Society
- So. Arizona Environmental Managers Society (SAEMS)
- Greater Tucson Leadership Council (GTL)
- Casa de Los Ninos
- Arizona Theater Company
- Tucson Rodeo
- Key to Employment 21st Century
- Boys and Girls Club
- Pima Community College
- Pima Community College Foundation
- Tucson Alliance for Autism
- Steele Children's Research
- Foster Care Review Board
- American Heart Association
- National Rifle Association
- Pima Community College
- El Rio Foundation
- Mining Foundation of the Southwest
- Amphi Foundation
- Reading Seed
- Girl Scouts
- Green Chamber of Commerce
- Perimeter Bicycling Association
- Gala-Noche de Exitos
- 4-H Club
- Sahuarita Elks Lodge
- Angel Charities
- Southern Arizona Rescue Association
- Arizona Foundation for Resource Education
- Biosphere 2 Earth Day
- Salvation Army
- Knights of Columbus
- Women in Science and Engineering (WISE)
- Sonoran Astronomical Society
- Ann Strandling Foundation
- Glassman Foundation
- Santa Cruz County Fair and Rodeo Association
- Arizona Opera Company

Sustainable Water

- Progressive water conservation and recycling techniques
- 50-60% reduction in water use due to Dry Stack Tailings technology
- Recharged 45,000 ac-ft of CAP water into Tucson Active Management Area
- No fault insurance and well protection program in place for over local well-owners

Tailings Management



La Coipa Mine in Chile

Oxide Leach Pad



- Lined System
- Closed Loop
- Evaporation Reduction Systems
- Drip System

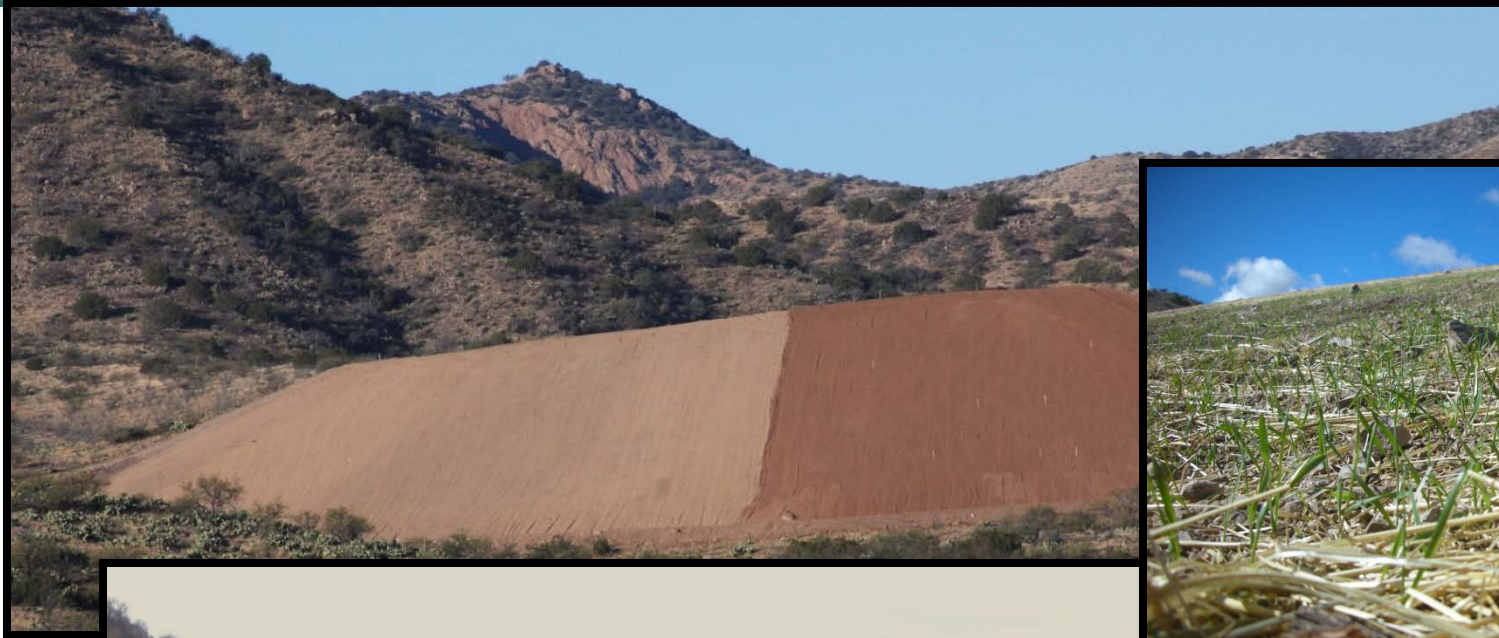


Concurrent Reclamation

- Slopes of 18 degrees (3:1)
- Topsoil and growth medium removed and saved for reclamation
- Reclamation to begin in the first year of copper production
- Rosemont \$550,000 research grant to U of A for studying native plant species



UofA Reclamation Test Plots



Viewshed Protection

Reclamation at Year 10



Sonoran Desert Conservation Plan

- Biological core areas avoided
- Facilities placed in one area to minimize impacts
- Viewshed protection by perimeter berm
- Water diversions to maintain downstream flows

LEED Building Design

- Reducing potable water consumption by more than 50% by using low-flow fixtures
- Maximizing energy performance, Improvement from traditional methods by 18-26%
- Investment in renewable energy and materials
- Improved indoor environmental quality for occupants
- Grey water capture and reuse in plant process

Bucyrus 100 Ton Electric Shovel

Comparison of Electric Vs. Hydraulic Shovel



Mftr/Model	Source	CO2 Emissions	
Bucyrus 495HR/HF	Coal	6876.22 tons	6238.00 tonnes
	Natural Gas	3178.63 tons	2883.60 tonnes
	Nuclear	486.53 tons	441.37 tonnes
	Solar	227.05 tons	205.97 tonnes
	Wind	64.87 tons	58.85 tonnes

Mftr/Model	Source	CO2 Emissions	
Komatsu PC8000-6	Diesel Fuel	12675.88 tons	11499.36 tonnes

Caterpillar 793F

Safety Enhancements

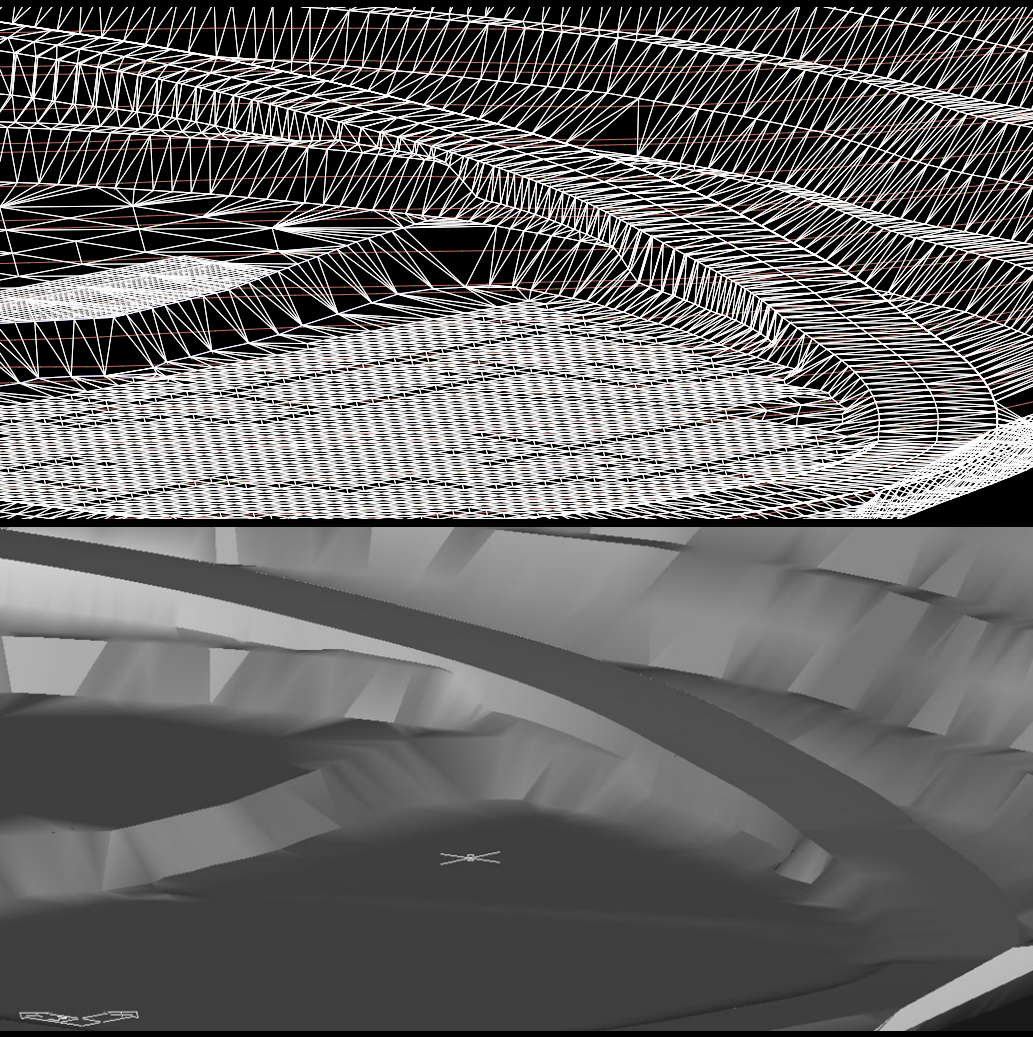
- All New Cab
- Increased ROPS
- Access System
- Ground Level Service



Tier II Emissions

- C175-16 – Reduced emissions
- ATAAC – reduced fuel consumption

Technology



- High Precision GPS
- High Speed Mesh
- Fleet Management Systems
- Machine Health
- Machine Control & Navigation

Dust Control

- Dust control systems on process equipment
- Speed controlled spray systems on large water trucks for reduced water use
- Use of dust suppressants on selected roads to control dust and minimize water use
- Covered storage for stockpile
- Use pit water for roads and shovel pits

Energy Performance and Efficiencies

- \$500k for solar technologies research
- Selection of high efficiency process equipment
- Wrap around drives on mill equipment
- Employee car pool programs and incentives
- 90 degree cut off fixtures, hooded fixtures and use of low pressure sodium lighting where applicable

Made in Arizona

Rosemont already contracts with many local firms employing hundreds of people

- M3 Engineering
- Mountain States R&D
- Tetra Tech
- AMEC
- WestLand Resources
- Applied Environmental Consulting
- E.L. Montgomery and Associates
- Strongpoint Public Relations
- Fennemore Craig, PC
- Sonoran Pump Supply
- Darling Environmental/Survey
- Call and Nicholas
- DM Engineering
- Securitas
- Western Refining
- Stantec
- Cooper Aerial
- Verdad Group, L.L.C.
- Mountain View Tours
- Bonesteel Consultants
- Navigant
- Securitas
- Verizon
- Skyline Labs
- Fedex-Kinkos
- Alphagraphics
- Southwest Exploration Services
- Turner Laboratories
- Reprographics
- Physical Resource Laboratories
- Metcon
- Boart Longyear
- Lang Drilling
- Layne Drilling
- University of Arizona
- Geomechanics Southwest
- Zonge Geosciences, Inc.
- Thomas Promotions
- Crossroad's Café in Sonoita
- Metro Restaurants
- Viscount Suite Hotels
- P&G Inc.
- KR Saline
- Environmental Planning Group
- Schlumberger Water Services
- CAS Laboratories
- Zimmerman and Associates
- Bob's Backhoe
- McMahon's Restaurants
- Pima Air and Space Museum
- Allegra Printing
- Empire Machinery



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Resourceful.



Thank you

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ROSEMONT 138KV TRANSMISSION LINE SITING STUDY PROJECT

Presentation and Q&A

Public Open House Meeting #3

April 13, 2010 – Corona de Tucson

April 14, 2010 – Quail Creek

Planning Process

- Task 1 – Siting criteria, define study area, and secondary data collection
- Task 2 – Opportunities/constraints analysis and link alternatives identification
- Task 3 – Detailed inventory and link alternatives assessment
- ***Task 4 – Route alternatives selection – we are here***
- Task 5 – Preparation and filing of Certificate of Environmental Compatibility (CEC) application
- Task 6 – CEC hearings

Alternatives

- **Substations/switchyards** for TEP interconnection and Rosemont operations both for construction and operation power
- **Northern Route** – generally follows northern boundary and a portion of eastern boundary of Santa Rita Experimental Range
- **Santa Rita Road** – generally follows Santa Rita Road alignment
- **Adjacent 46kV line** – generally follows existing 46kV power line alignment

Alternative Route Families Map

- [Route](#)

Alternative Routes Recommended to be Carried Forward

- Santa Rita Road – Options 1 and 3
- Adjacent 46kV Line – Options 1, 2, and 4

Options

- [Map\(s\)](#) showing options

Agency and Public Participation Activities

- Agency briefings
- Stakeholder group meetings
- Field trip
- Public open houses
- Community briefings
- Newsletters
- Telephone information line
- Website (TEP)



Key Considerations for Selection of Recommended Routes

- Minimizing environmental impacts
- Electrical system planning requirements and timeframes
- Engineering
 - Constructability
 - Cost
 - Right-of-way
- Public and agency input
- Regulatory permits

Next Steps

- Finalize route analysis for CEC application
- File CEC application – timing depends upon publication of the Coronado National Forest's Rosemont Copper Project Draft Environmental Impact Statement

Questions

Questions?



DRAFT

Rosemont 138kV Transmission Line Project Preliminary Route Alternatives

Legend

Santa Rita Road Family - Option #1
via links 105, 155, Greaterville construction
power option

- Permanent Link
(20, 25, 60, 100, 105, 155, 140, 170,
160, 190, 210)
- Link Identification Number
- Link Node
- Preliminary Alternative Link

General Reference Features

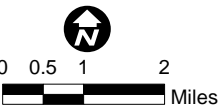
- Existing Substation
- Proposed Switchyard/Substation
- Existing 345kV Transmission Line
- Existing 230kV Transmission Line
- Existing 138kV Transmission Line
- Existing 115kV Transmission Line
- Existing 46kV Transmission Line
- National Forest Boundary
- Updated Project Study Area Boundary
- County Boundary
- Interstate
- Highway
- Secondary Road
- Railroad
- River / Wash
- Township Boundary

Project Location



Sources

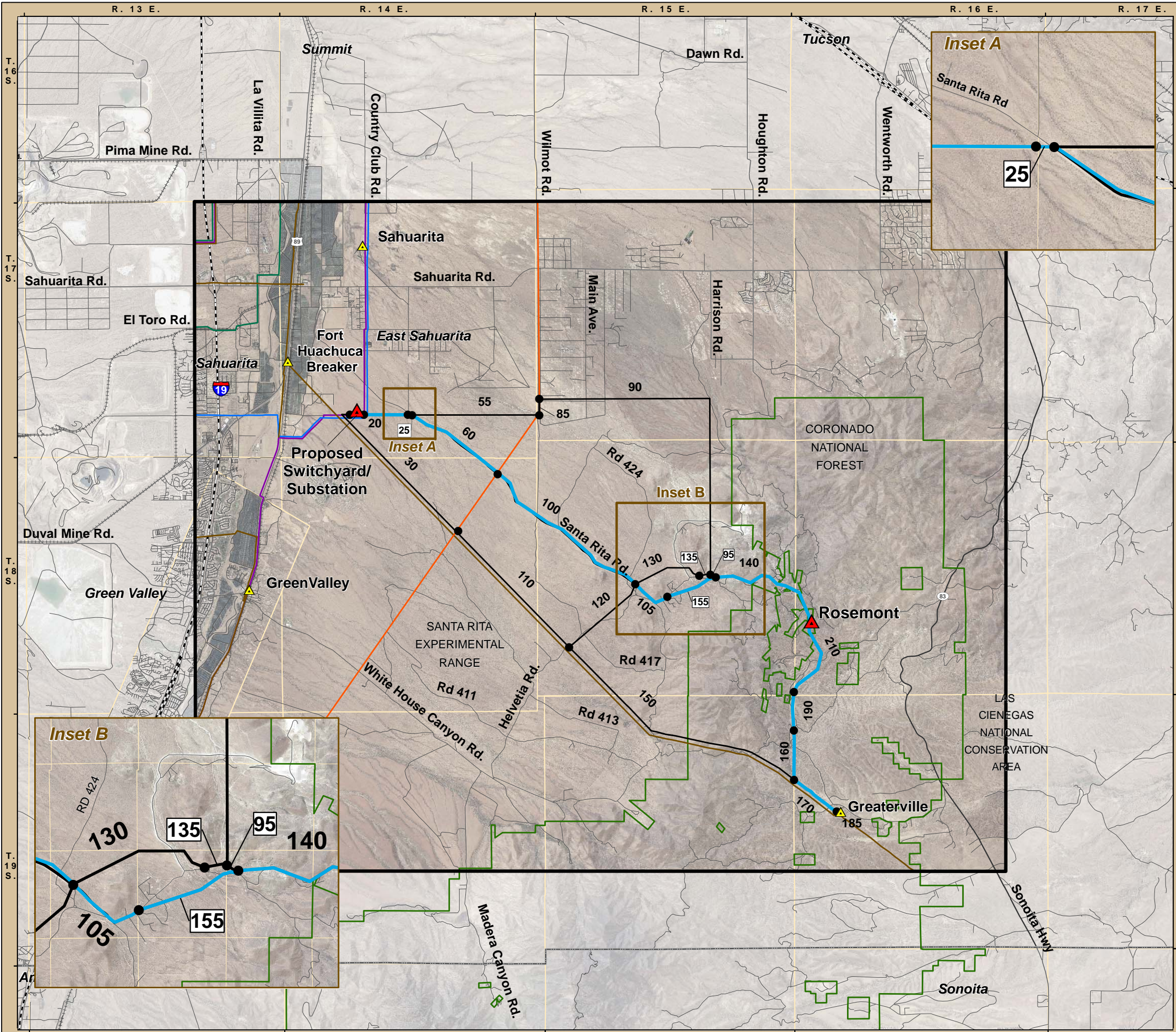
StreetMap USA 2008; TEP 2008; EPG, 2008,
Pima County 2008, Rosemont Copper Company
2008



March 25, 2010



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Rosemont 138kV Transmission Line Project Preliminary Route Alternatives

Legend

Adjacent 46kV Family - Option #1
Helvetia route via links 105, 155, Helvetia construction power option

Permanent Link
(30, 110, 120, 105, 155, 140)

Link Identification Number
 Link Node
 Preliminary Alternative Link

Temporary Interconnection

General Reference Features

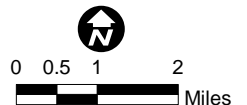
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- Existing 115kV Transmission Line
- Existing 46kV Transmission Line
- National Forest Boundary
- Updated Project Study Area Boundary
- County Boundary
- Interstate
- Highway
- Secondary Road
- Railroad
- River / Wash
- Township Boundary

Project Location



Sources

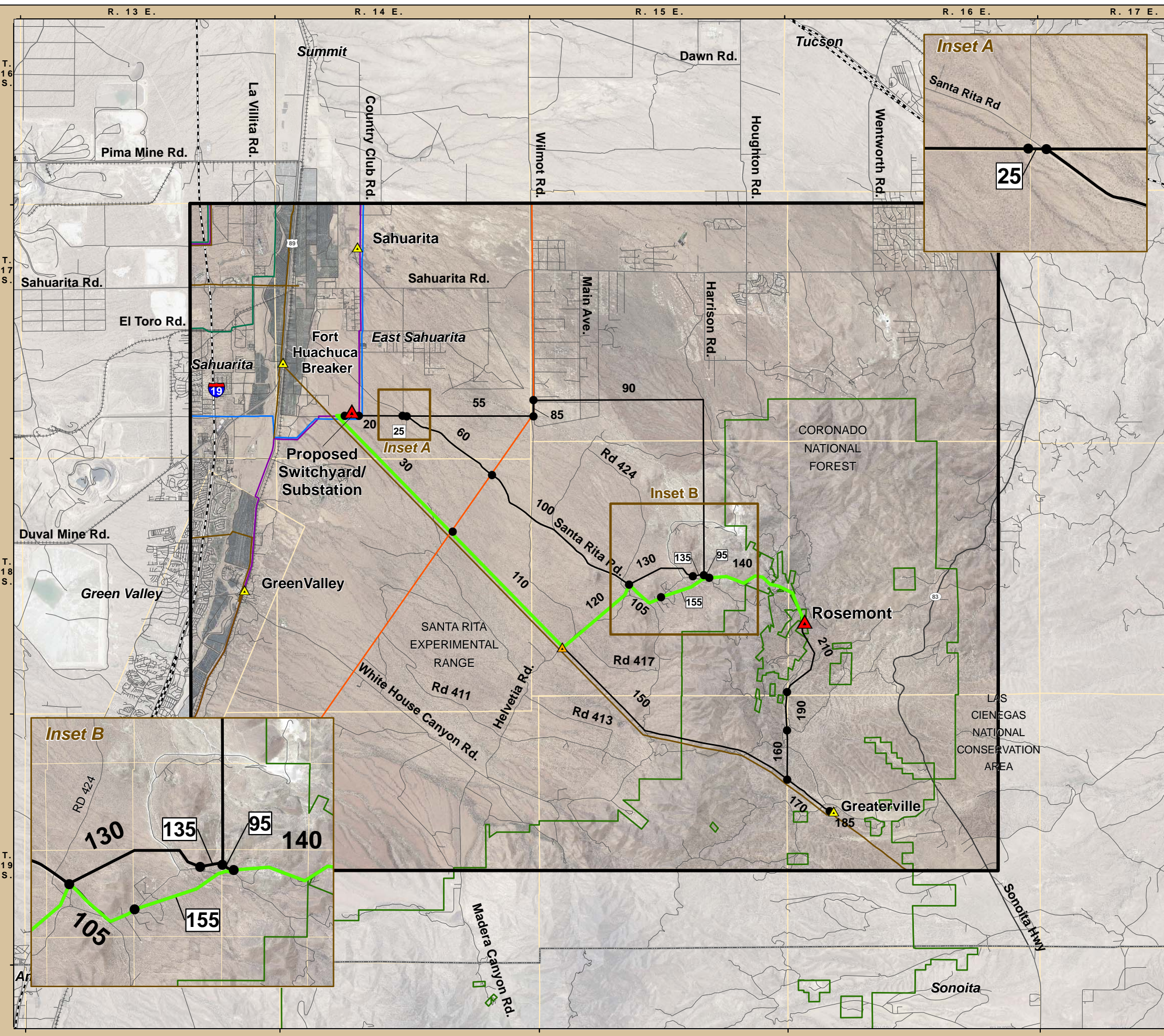
StreetMap USA 2008; TEP 2008; EPG, 2008, Pima County 2008, Rosemont Copper Company 2008



March 24, 2010



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Rosemont 138kV Transmission Line Project Preliminary Route Alternatives

Legend

Adjacent 46kV Family - Option #2
Helvetia route via links 130, 135, Helvetia construction power option

- Permanent Link
(30, 110, 120, 130, 135, 95, 140)
- Link Identification Number
- Link Node
- Preliminary Alternative Link
- Temporary Interconnection

General Reference Features

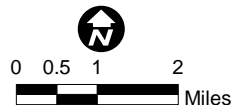
- Existing Substation
- Proposed Switchyard/Substation
- Existing 345kV Transmission Line
- Existing 230kV Transmission Line
- Existing 138kV Transmission Line
- Existing 115kV Transmission Line
- Existing 46kV Transmission Line
- National Forest Boundary
- Updated Project Study Area Boundary
- County Boundary
- Interstate
- Highway
- Secondary Road
- Railroad
- River / Wash
- Township Boundary

Project Location



Sources

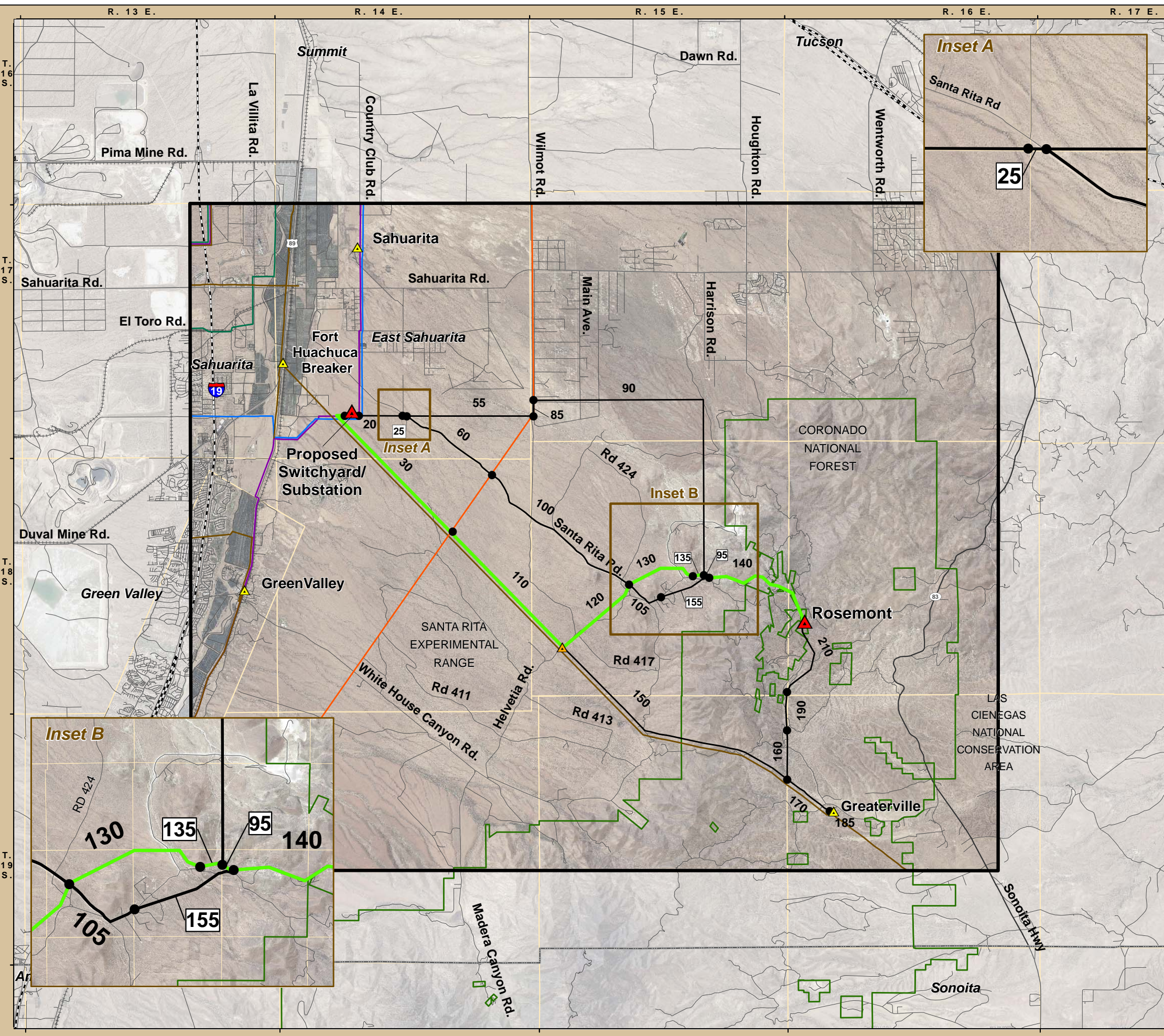
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Rosemont 138kV Transmission Line Project Preliminary Route Alternatives

Legend

Adjacent 46kV Family - Option #4
Greaterville route, Greaterville construction power option

Permanent Link
(30, 110, 150, 170, 160, 190, 210)

Link Identification Number
Link Node
Preliminary Alternative Link

General Reference Features

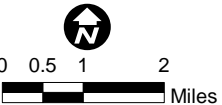
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- Existing 115kV Transmission Line
- Existing 46kV Transmission Line
- National Forest Boundary
- Updated Project Study Area Boundary
- County Boundary
- Interstate
- Highway
- Secondary Road
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- Township Boundary

Project Location



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StreetMap USA 2008; TEP 2008; EPG, 2008,
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